MARIN
MOUNTAIN BIKES

Owner's Manual & Warranty

Congratulations !

You've just purchased one of the best mountain bikes on the market! We combine the most advanced technology with superior craftsmanship to give you high performance off-road pleasure. At Marin Mountain Bikes, we know what the trails are like, because when we're not working, we're riding!

MARIN MOUNTAIN BIKES • 930 Butterfield Rd. • San Anselmo, CA • 94960 • (415) 861-4004

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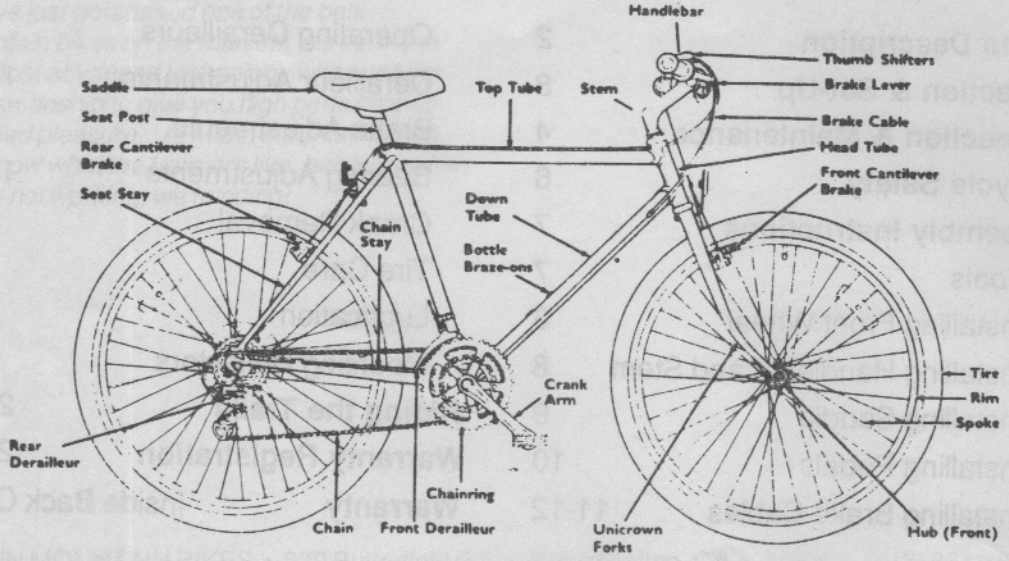
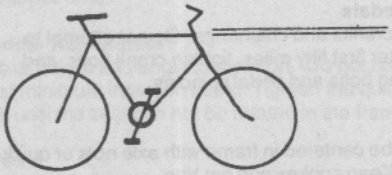
PARTS DESCRIPTION



SELECTION & SET-UP

Frame Sizo

A good frame fit means being able to straddle the horizontal frame bar with at least 1" clearance when both feet are flat on the ground (see illistration).



Assembly

Carefully follow assembly instructions, making sure all nuts, bolts, and screws are securely tightened.

Saddle and Handlebar Adjustment

Once the correct frame is determined, the saddle and handlebars can be adjusted for maximum comfort and safety. The seat should be adjusted so that the rider's knee remains slightly bent when his foot is in the lowest pedaling position. Handlebars should be raised or lowered so that they are about even with the seat height.

NOTE: THE MANUFACTURER IS NOT RESPONSIBLE FOR INJURY, DAMAGE, OR FAILURE THAT RESULTS FROM FAULTY ASSEMBLY OR MAINTENANCE AFTER SHIPPING.

INSPECTION AND MAINTENANCE

Run through this check list frequently to keep your new bike in top running condition:

General
Retighten all nuts and bolts every 1 to 2 weeks. Inspect the bike for worn or damaged parts, check fork and frame alignment, and make sure all components are seated correctly.

Brakes
Keep brake shoes adjusted 3-4 mm from rim. Inspect them for wear and replace when necessary. Wipe any dirt or oil from rims.

Control Cables
Inspect cables and take up slack. Replace when worn or damaged. Do not allow cables to kink.

Front Fork
Bent or damaged forks should be replaced. Never attempt to to repair by straightening.

Head Set
Keep locknut tight, making sure there is no play in bearings. The fork should turn freely.

Front Wheel
Keep axle nut or quick release tight. Keep spokes tight and rim true.

Crank Bearings
Inspect crank after wet or muddy ride. The spindle should turn freely without side play. Keep the bearings well greased.

Crank and Pedals
Replace bent cranks and chainrings. Do not attempt to straighten. After first fifty miles, tighten crank bolts, and check chainring bolts and pedal spindles.

Rear Wheel
Wheel should be centered in frame with axle nuts or quick release tight. Keep spokes and rim true.

Handlebar
Adjust for comfort, keeping the maximum height mark within fork. Tighten bolts securely. Replace worn grips making sure they do not slip on handlebars.

INSPECTION AND MAINTENANCE

Chain
Check frequently for damage or stretch, replacing when necessary. Lubricate often with oil or spray lubricant. Be sure not to get spray on wheel rim or frame.

Derailleurs
Keep them well adjusted. Shift only while pedaling and avoid impact to rear derailleur. (Do not let bike fall on derailleur unit).

Saddle Adjustment
Adjust height and angle for comfort. Do not raise seat post past minimum insertion mark. Tighten the quick release bolt until the seat can not be rotated in the frame.

Tires
Keep tires inflated to the pressure indicated on the tire wall. A foot or frame pump should be used. (Do not use unregulated pressure pumps.) Make sure tires are properly seated on rims and check tire-beads.

Reflectors
Reflectors should be mounted on the front fork, rear of seat, pedals and spokes. Damaged units should be properly replaced.

Frame
Immediately replace a bent or broken frame. Frame damage causes excess strain on other bicycle parts and is very dangerous.

BICYCLE SAFETY

Rules for Safe Cycling

- Always wear a helmet and eye protection when cycling.
- Observe all traffic regulations, signals, stop signs, one-way streets, etc.
- Always use an adequate lighting system for night riding.
- Give pedestrians the right of way. Ride on sidewalks only when absolutely necessary and use special care.
- Be alert for cars pulling out into traffic. Keep sharp watch for sudden opening of car doors.
- When making a turn, have crank arms in a horizontal position.
- Never hitch onto other vehicles.
- Do not "stunt" ride or race in traffic.
- Never carry passengers. Never carry packages that obstruct vision or inhibit control of the bicycle.
- Inspect and test brakes frequently. Make sure all nuts and bolts are securely tightened. Keep your bike perfectly tuned.
- Use appropriate hand-signals for turning and stopping.
- Keep to the right of traffic and ride in a straight line. Always ride single file.
- Slow down at intersections and look both ways before crossing.
- Do not weave in and out of traffic or swerve from side to side.
- Check park rules before riding your mountain bike on trails.
- Slow down when approaching hikers or equestrians.

ALWAYS RIDE CAREFULLY

Special Precaution for Wet Road Conditions

Braking power is reduced in wet conditions and special care must be taken to stop safely. Proper brake adjustment and cable lubrication will help, but the major responsibility lies with the rider. Since increased lever force is required, ride slower and apply brakes sooner than would be necessary on dry roads.

ASSEMBLY INSTRUCTIONS

NOTE: The following instructions will tell you how to assemble your new Marin Mountain Bike. If you do not have previous experience with bicycle assembly and maintenance, we recommend that you have your bicycle assembled and tuned by your local Marin Mountain Bike dealer.

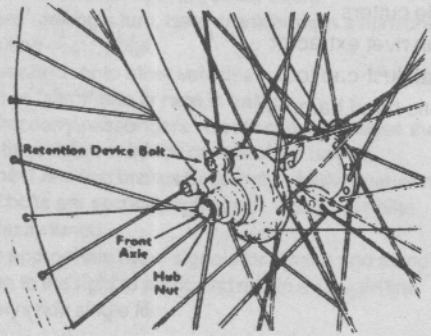
Assembly and Adjustment Tools

- Allen keys: 2.5mm, 4mm, 5mm, and 6mm
- Screwdriver
- Phillips screwdriver #2
- Open end wrenches: 8mm, 9mm, 10mm, 13mm thin type, 15mm, and 17mm
- Combination headset and bottom bracket tools
- Pliers
- Suntour freewheel remover tool
- Campagnolo or Sugino crank-puller tool
- 14mm crank-fixing bolt wrench
- Cable cutters
- Chain rivet extractor
- Pedal dust-cap tool
- Plastic head hammer

ASSEMBLY INSTRUCTIONS

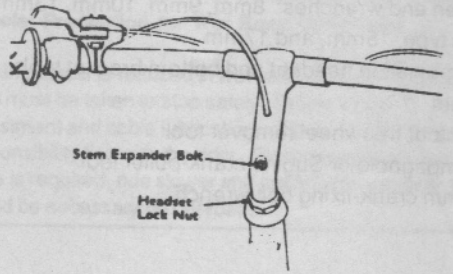
Installing The Front Wheel

1. Loosen hub nuts on both sides of wheel.
2. Insert axle into grooves on front fork ends.
3. Put retention devices on both sides of axle and tighten hub nuts.
4. Make sure the front wheel is centered in the front fork.



Installing The Handlebar

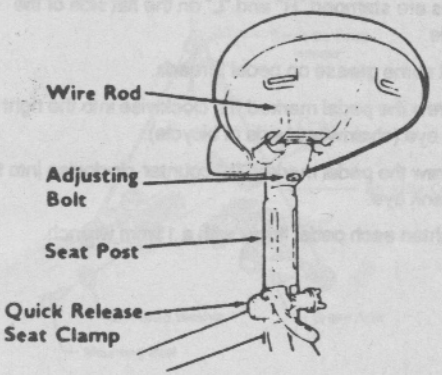
1. Loosen stem expander bolt until cone is loose. Apply grease and insert it into the front fork stem to at least the MINIMUM INSERTION line.
2. Position handlebars so they are perpendicular to the front wheel.
3. Tighten stem expander bolt firmly.
4. Check tightness by holding the front wheel between your legs and trying to remove the handlebars with your hands. There should be no slipping.



Installing The Saddle

1. Loosen the seat-post clamp bolt.
2. Insert the smaller end of the post into the clamp with bolt to rear.
3. Tighten seat-post bolt with your fingers.
4. Grease the seat post and insert into frame. Adjust the quick-release seat clamp until the seat post locks into frame.
5. Adjust the seat angle so it is parallel with the top tube. Tighten seat-post bolt.
6. Try twisting the seat to check for tightness.

Note: The saddle can be adjusted to position you closer or farther from the handlebars. This is achieved by sliding the saddle on its two wire rails.

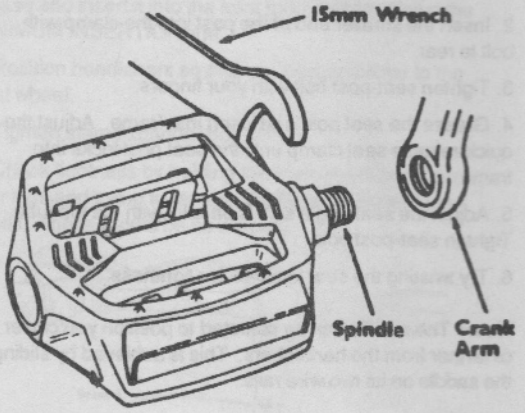


ASSEMBLY INSTRUCTIONS

Installing The Pedals

Pedals are stamped "R" and "L" on the flat side of the spindle.

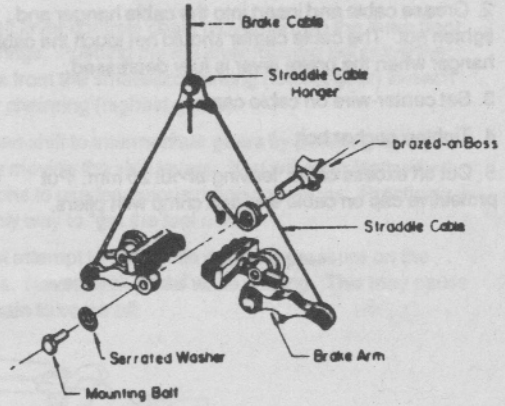
1. Put some grease on pedal threads.
2. Screw the pedal marked "R" clockwise into the right crank eye (chainwheel side of bicycle).
3. Screw the pedal marked "L" counter-clockwise into the left crank eye.
4. Tighten each pedal firmly with a 15mm wrench.



Installing Brake Cables

Front Brake Cable

1. Insert the cable end-nipple into slot on brake lever.
2. Pull cable out of housing, apply grease, then feed cable back into housing.
3. Feed cable through the handlebar stem adjuster.
4. Insert cable into the cable hanger and tighten nut.
5. Set center-wire end-fitting into the hook-side brake arch. Hang center-wire on cable carrier and feed the free end through the wire-fixing bolt hole on the other brake arch.
6. Align each brake pad on either side of the rim, allowing 3-4 mm between pad and rim.
7. Cut off excess cable, leaving about 25mm. Put protective cap on cable end and crimp with pliers.

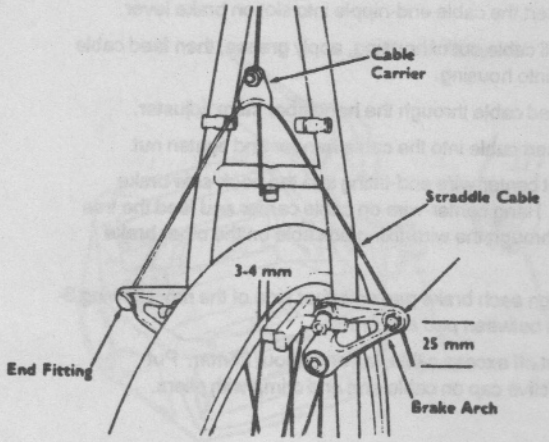


WARNING: Brakes are an extremely important safety component of a bicycle. If unsure about cable installation and adjustment, refer service to a professional bicycle mechanic.

ASSEMBLY INSTRUCTIONS

Rear Brake Cable

1. Insert the cable end-nipple into slot on brake lever.
2. Grease cable and insert into the cable hanger and tighten nut. The cable carrier should not touch the cable hanger when the brake lever is fully depressed.
3. Set center-wire on cable carrier.
4. Tighten anchor bolt.
5. Cut off excess cable, leaving about 25 mm. Put protective cap on cable end and crimp with pliers.



Operating Derailleurs

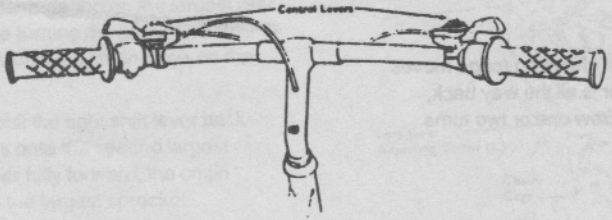
Your Marin Mountain Bike's derailleur system changes gear ratios by moving the chain from one sprocket to another. The chain can be moved only while pedaling forward. Never force the shift. The smoothest shifts are made while pedaling easily. Always down shift **before** starting up a hill.

The derailleur system is equipped with two handlebar-mounted control levers. The right lever controls chain movement on the five or six rear sprockets. Pushing the lever forward will move the chain from the smallest sprocket (highest gear) to each larger sprocket (lower gears).

The left lever controls chain movement on the three front chainrings. Pushing the left lever forward will move the chains from the smallest chainring (lowest gear) to each larger chainring (highest gears).

You can shift to intermediate gears by pedaling lightly and slowly moving the shift levers. You will soon learn which positions to use for various riding conditions. Practicing is the only way to "get the feel of it."

Do not attempt to shift while applying pressure on the pedals. Never back-pedal while shifting. This may cause the chain to come off.



ASSEMBLY INSTRUCTIONS

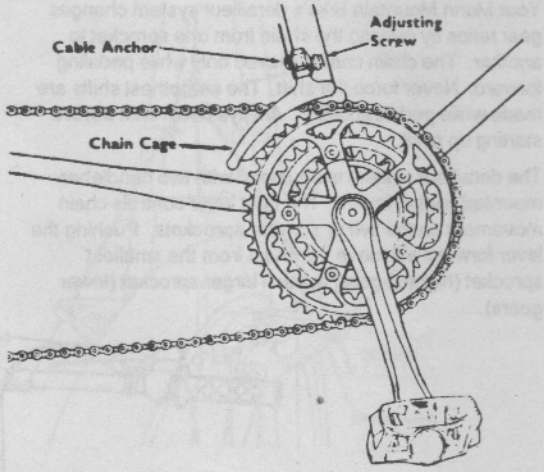
Front Derailleur

1 The outside of the chain cage must be parallel to the front chainrings, and be 2-3 mm above the large chainring. If necessary, loosen the frame-clamp bolt and align the cage. Tighten clamp bolt.

2 With the shift lever all the way back, check shift cable for slack. Slack can be taken up by loosening the cable anchor bolt and pulling the cable end with pliers, until tight. Tighten anchor bolt.

3. If chain comes off the largest chainring (cage moves too far out) when the left shift-lever is fully forward, tighten the high-gear adjusting screw one or two turns. Test shift and re-adjust, if necessary.

4 If chain comes off the smallest chainring (cage moves too far in) when the left shift-lever is all the way back, tighten the low-gear adjusting screw one or two turns.



Rear Derailleur

1. Raise the rear wheel off the ground. While turning the crank, pull the right shift lever all the way back. The chain should be engaged on the smallest rear sprocket. If it is not, continue turning the crank and turn the high-gear adjusting screw until the chain stays on the smallest sprocket.

2. While turning the crank, push the right shift lever forward until the chain moves onto the second smallest sprocket. Pull the right lever all the way back; the chain should move smoothly onto the smallest sprocket.

3. While turning the crank, push the right shift lever fully forward. The chain should be engaged on the largest rear sprocket. If it is not, continue turning the crank and turn the low gear adjusting screw until the chain stays on the largest sprocket.

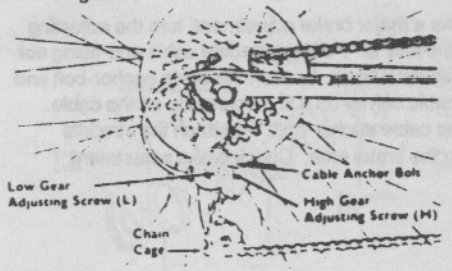
4. While turning the crank, pull the right shift lever back slightly until the chain moves onto the second largest sprocket. Push the right lever fully forward; the chain should move smoothly onto the largest sprocket.

5. While turning the crank, push the right shift lever fully forward. Continue turning the crank and pull the right shift lever all the way back. The chain should move smoothly from the largest to the smallest sprocket.

Cable Readjustment

Cable stretching can occur, particularly during break-in, and may cause the derailleurs to malfunction. Cable stretching has occurred if there is slack wire when shift levers are all the way back.

To take up slack, loosen the cable-securing bolts and pull the cable tight



ASSEMBLY INSTRUCTIONS

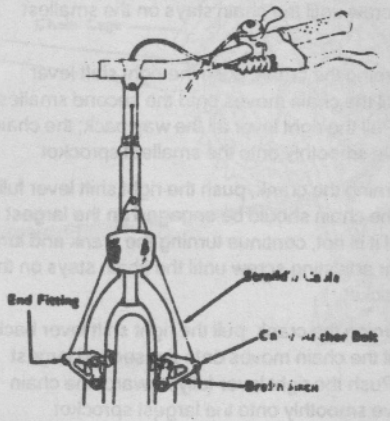
Brake Adjustment

1. Cantilever brakes require occasional adjustment, since cables stretch and brake-shoe blocks wear. Brake shoes should be kept 3-4 mm. from the rim. Usually, the rear brake lever mounts on the right and the front brake lever mounts on the left of the handlebars. Brake levers can be reversed, if desired. Simply reverse the cable.

2. To fine tune the brake adjustment, loosen the adjusting barrel locknut. To bring brake shoes closer to the rim, turn adjusting barrel out. If brake shoes are rubbing on the rim, turn adjusting barrel in. Retighten the locknut.

3. To make a major brake adjustment, turn the adjusting barrel all the way in. Pull the straddle cable end-fitting out of the brake-arch hook. Loosen the cable anchor-bolt and slide the cable carrier up a short distance on the cable. Tighten the cable anchor-bolt. Reattach the straddle cable onto the brake arch. Check brake adjustment.

4. Adjust the brake shoes so that they are parallel with rim. Tighten brake bolt. NOTE: For optimum braking efficiency, the front part of the pad should make contact with the rim first.



Bearing Adjustments

The Marin Mountain Bike has four sets of bearings that may require adjustment and lubrication: A) Headset, B) Bottom bracket, C) Pedals D) Hubs.

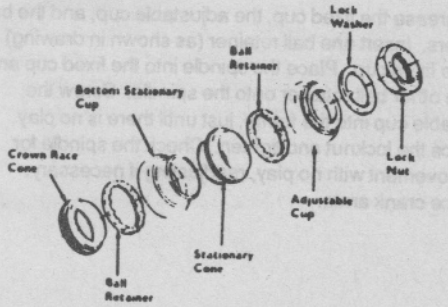
Inspect bearings frequently, especially after off-road riding. The service interval will depend on mileage and road conditions. With some skill and the proper tools, you should be able to lubricate and adjust bearings yourself. If you can't, have your bike checked and serviced by your dealer.

Headset

1. To check adjustment, remove the front wheel. There should be no play of the fork in the frame. The fork should turn freely, without rough spots.

2. If the bearings need adjustment, loosen the locknut with the two headset tools. Tighten or loosen the adjustable cup. Tighten the locknut and recheck.

3. To lubricate the headset, remove the handlebar assembly. Remove the locknut and adjustable cup. Pull fork out of frame and remove the two ball retainers. Clean grease from all parts and inspect bearing races for wear and rust. Regrease all parts. Install one ball retainer (as shown in drawing) on the fork steer. Insert fork back into frame. Install the other ball retainer onto the stationary cone. Screw the adjustable cup down until play is taken up. Apply lockwasher and locknut, readjust, and tighten.



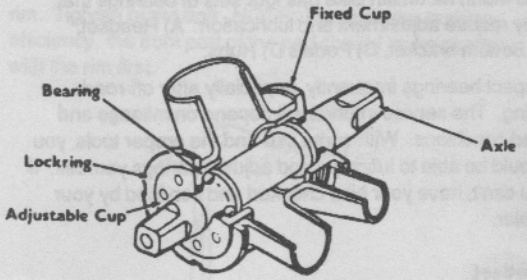
ASSEMBLY INSTRUCTIONS

Bottom Bracket

1. The bottom bracket requires little attention unless the bike is used in water or mud. Remove both crankarms and turn the spindle. Any play or roughness indicates the need for lubrication and adjustment.

2. Using the correct size spanner wrench, remove the lockring. Remove the adjustable cup and pull spindle from frame. Pull the ball retainers away from the spindle and fixed cup. Clean grease from all parts and inspect for wear. It is not necessary to remove the fixed cup unless it needs replacing.

3. Regrease the fixed cup, the adjustable cup, and the ball retainers. Insert one ball retainer (as shown in drawing) into the fixed cup. Place the spindle into the fixed cup and put the other ball retainer onto the spindle. Screw the adjustable cup into the frame, just until there is no play. Replace the locknut and tighten. Check the spindle for free movement with no play, readjusting if necessary. Replace crank arms.



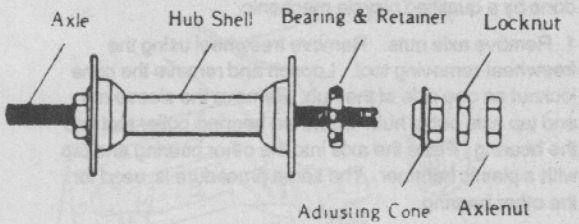
ASSEMBLY INSTRUCTIONS

Hubs

1. Remove axle nuts. Remove freewheel using freewheel-removing tool. Loosen cone and locknut on one side of axle. Remove axle from hub.

2. Clean all parts and inspect for pitting. Uneven cone wear usually results from riding on a loose hub or from a bent axle. Replace if necessary.

3. Apply grease to both sides of clean hub. Put same number of balls on each side. Insert axle. Thread cone and locknut back into axle. Tighten cone and locknut against each other.



Sealed Hubs

Some of our Marin Mountain Bike hubs contain sealed-cartridge bearings which do not require lubrication, however, they should be checked from time to time. Remove the wheels and turn the axles with your hands. They should turn smoothly with very little play. Hub bearings can be removed and replaced, however, THEY SHOULD NOT BE REMOVED UNLESS THEY NEED REPLACING.

ASSEMBLY INSTRUCTIONS

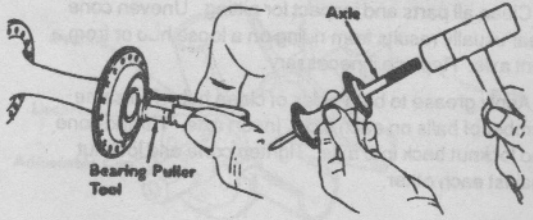
Sealed Hub Bearing Replacement

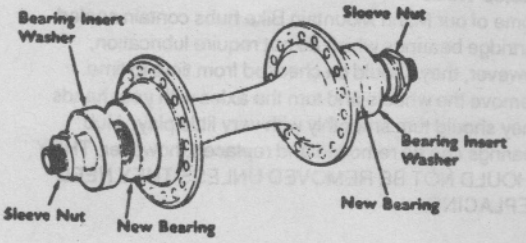
Note: Due to complexity of this repair, it should only be done by a qualified bicycle mechanic.

1. Remove axle nuts. Remove freewheel using the freewheel-removing tool. Loosen and remove the cone locknut on one side of the hub. Remove the sleeve nut and tap axle out of hub. Insert the bearing-puller tool into the bearing. Place the axle into the other bearing and tap with a plastic hammer. The same procedure is used for the other bearing.

2. To install the new bearings, place one bearing-insert washer onto the axle; then, place one new bearing onto the axle. Put this assembly into the hub. Place the other bearing onto the axle on the other side of the hub. Put the other bearing-insert washer and the sleeve nut onto the axle. Tighten the sleeve nut until both bearings are fully seated in the hub.

3. Loosen the nut and remove the axle. Check both bearings for smoothness. Reinstall the axle, remembering to remove the bearing-insert washers. Replace the sleeve-nut, spacer, and locknut. Do not tighten the sleeve-nut against the bearings, as this may damage them.



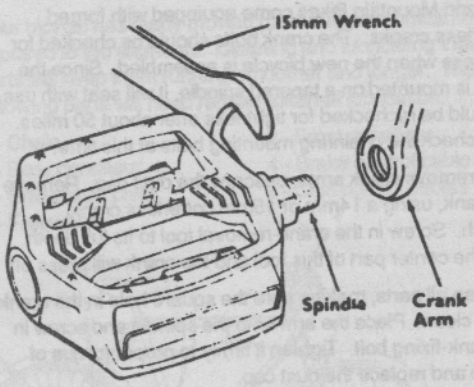


Pedals

1. Turn each pedal, checking for roughness or noise. Pedals rarely need maintenance, but if they do, proceed as follows.

2. Remove pedal from crank and take off dust-cap. Remove locknut and key washer. Remove cone and pull spindle from pedal body, being careful not to lose any of the balls. Clean grease from all parts and inspect for wear.

3. Regrease the bearing cups and replace the same number of balls into each side. The grease will hold the balls in place. Carefully place the spindle marked "R" back into the right pedal body, and the "L" spindle into the left pedal body. Thread the cone back onto spindle. Turn the spindle to tighten the cone down onto balls. Replace the key washer and locknut. Test spindle for play or tightness. Adjust the cone and tighten locknut. Replace pedal on crankarm.



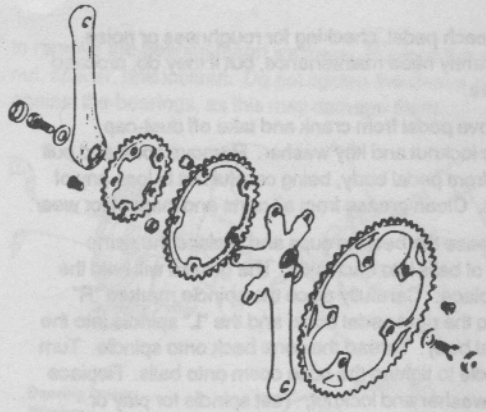
ASSEMBLY INSTRUCTIONS

Crank Removal

All Marin Mountain Bikes come equipped with forged cotterless cranks. The crank bolts should be checked for tightness when the new bicycle is assembled. Since the crank is mounted on a tapered spindle, it will seat with use. It should be rechecked for tightness after about 50 miles. Also, check the chainring mounting bolts at this time.

1. To remove crank arms, unscrew the dust cap. Remove the crank, using a 14mm or 15mm cotterless crank wrench. Screw in the crank-removal tool to its full depth. Turn the center part of this tool and the crank will press off.

2. Clean all parts, making sure the square hole in the crank arm is clean. Place the arm onto the spindle and screw in the crank-fixing bolt. Tighten it firmly to proper torque of 20 ft-lb and replace the dust cap.



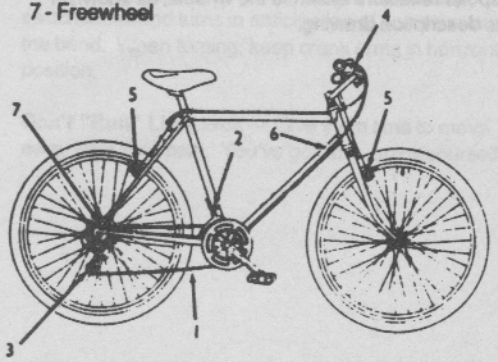
Tire Care & Wheel Adjustments

- Tire pressure is indicated on tire sidewalls.
- Use hand or foot pump to inflate tires. (Do not use unregulated pressure pumps.)
- Never ride with an underinflated tire. Improper tire pressure can cause excessive wear or blowouts.
- Make sure tire-beads are properly seated in the rims.
- Check rims for trueness.
- Minor wheel truing can be accomplished by adjusting the spoke tonsion, however, we recommend having it done by your dealer.

Lubrication

Your bicycle has many moving parts that are constantly exposed to the elements. Cleaning and lubricating these parts will keep them running smoother and longer. The following parts will need regular external lubrication.

1 - Chain
2 - Front derailleur
3 - Rear derailleur
4 - Brake control cable
5 - Brake arch pivot
6 - Shift control cables
7 - Freewheel



ASSEMBLY INSTRUCTIONS

Mounting Reflectors

Your bicycle comes with a complete reflector kit. Mounting is quick and easy, as shown in the drawing.

1. The clear reflector is mounted on the front-fork reflector bracket and always faces forward.

2. The red reflector is mounted on the seat-staybridge reflector bracket and always faces to the rear.

3 The spoke reflectors attach to the wheels, as shown in the parts description drawing.

RIDING THE TRAILS

Always Yield — Even if at times it seems inconvenient. Being sensitive to how others perceive you will assure a positive image for your sport and minimize the restrictions that follow confrontations and negative encounters. Remember, bicycles in the back country are a new experience for horses and hikers. New trends are often resisted, so it's best to defer.

Pass with Care — Let others know of your presence well in advance. A greeting or simple handlebar chime will suffice. Being startled out of contemplative bliss by a quiet, whirring blur, will arouse the wrath of the most tolerant hiker. Be especially careful when passing a horse, as each will react differently. By asking the rider if his horse is easily spooked you demonstrate that you have an awareness of the equestrian's needs, which generally causes the equestrian to regard you more like a peer and less like a rattlesnake. In some instances it may be necessary to dismount and lift your bike off the trail to let others pass.

Stay on Trails — Riding cross country damages meadows and other fragile ecosystems. Never cut switchbacks as this accelerates erosion. Be aware of the soil type you plan to ride on. If it is a clay soil wait three or four days after a rain before using that route, choose an alternate route preferably one with shale or decomposed granite surface.

Control Your Speed — Safe speeds are relative to terrain and your experience as a rider. Approach switchbacks and turns in anticipation of someone around the bend. When turning, keep crank arms in horizontal position.

Don't "Run" Livestock — Give them time to move away from your path. You've got time, enjoy yourself.

RIDING THE TRAILS

Don't Litter — Pack out what you pack in. If you have room in your bags pack out more than your share.

Use Permits — Check with local authorities regarding fire permits and entry permits. More off-road needs will be addressed if our resource use is documented. Check with landowners regarding private land access. "No trespassing" often means please ask first.

Plan Ahead — The off-road bicycle will open new horizons to you, some of these horizons should be approached with respect. If distances are involved don't travel solo. Expect weather changes. Leave word where you plan to go and when you plan to return.

Minimize Impacts — The practice of minimum impact camping is basic to the philosophy of responsible off-road cyclists. "Take only pictures, leave only knobby prints."

MARIN MOUNTAIN BIKES

Warranty Registration

Please print legibly.

Name: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Phone: ( ) _____

Date purchased: _____ Dealer: _____

Address _____ State _____

How did you hear about Marin Mountain Bikes? _____

place
stamp
here

Marin Mountain Bikes
930 Butterfield Rd.
San Anselmo, CA 94960

LIMITED WARRANTY

MARIN MOUNTAIN BIKE CO. (hereinafter referred to as MMB) warrants the replacement of the frame and fork, due to defect in material and/or workmanship of this MARIN MOUNTAIN BIKE for ten years from date of purchase. In addition, MMB will warrants the replacement of any other components for 90 days from date of purchase.
Warranty applies to original owner ouly.
MMB will replace, without charge, any part that is determined by MMB to be defective under the terms of this warranty. However, transportation to the site of repair and authorized dealer labor charges are not covered by this Warranty.

CLAIMS UNDER THIS WARRANTY must be presented to an authorized MARIN MOUNTAIN BIKE dealer who in turn, will present the claim to MMB. Any part replaced under the terms of this Warranty must be installed by an authorized MARIN MOUNTAIN BIKE dealer exclusively.

FAILURE DUE TO ACCIDENT, abuse, neglect, normal wear, improper assembly, improper fit, maintenance bv any other than an authorized MARIN MOUNTAIN BIKE dealer, or use of parts inconsistent with the use originally intended as sold or incompatible with those parts installed as original equipment by the factory are not covered by this Warranty.

THERE ARE NO OTHER WARRANTIES OR GUARANTEES, expressed or implied, made by MMB on this bicycle. The sole and exclusive liability of MMB and/or any of its authorized dealers, affiliates or agents pursuant to this Warranty shall be for the replacement of the defective part, and incidental or consequential damages are expressly excluded by this Warranty. The authorized MARIN MOUNTAIN BIKE dealer may grant certain other policies respecting labor charges but these do not bind MMB and are not a part of this Warranty.

NOTICE: This bicycle is not manufactured, marketed, or sold for use at any time in racing, motorcross, stunt riding, or any similar activity, nor is it intended to be used with a motor or power assist of any kind. Neither under this Warranty nor under any State of Federal Law or the common law or otherwise shall MMB, its authorized dealers, affiliates, or agents be liable for any damage or failure, including personal injury and/or loss of life, resulting from such use.

OTHER LEGAL RIGHTS, in addition to those specific ones given you by this Warranty, may also be available to you depending on and varying with the state in which you live.

THIS BOOKLET IS IN ADDITION TO THE OWNERS MANUAL INCLUDED WITH YOUR BICYCLE

THIS ADDITION SHOWS THE PROPER SIZE SELECTION OF YOUR BICYCLE AND MINIMUM HANDLE BAR STEM INSERTION MARK.

Owner's Manual & Warranty

MARIN
MOUNTAIN BIKES

Addendum to Assembly Manual

CHOOSING THE PROPER SIZE BICYCLE

THIS ADDITION SHOWS THE PROPER SIZE SELECTION OF YOUR BICYCLE.

Fig. 1

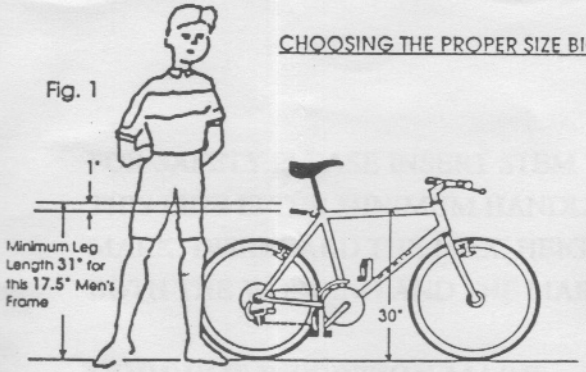
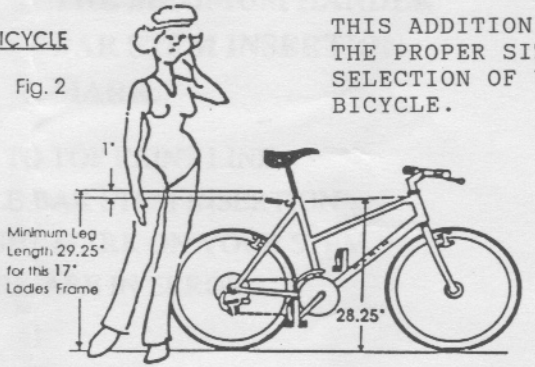


Fig. 2



PROPER SIZE OF BICYCLE		
frame size	Bike Height top of horizontal tube to floor	leg length of rider
15.5"	28.25"	29.25"
17.5"	30"	31"
19"	31.5"	32.5"
20.5"	32.5"	33.5"
15" kids	27.25"	28.25"
17" Ladies	28.25"	29.25"

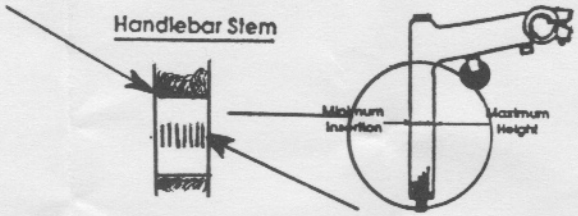
The above diagrams indicate the proper method of determining the minimum size of a bicycle in relation to the height of the individual. The relationship of the bicycle frame size to the height of the bicycle, to the leg length of the rider, is illustrated in the chart above. The bicycle height is measured from the floor to the top of the horizontal bar as illustrated in fig. 1 & 2. To fit the bicycle the rider should straddle the horizontal bar with both feet flat on the floor. There should be at least 1" clearance above the horizontal bar. Thus, a rider with a leg length of 31" (inside leg measurement), should ride a 17.5" frame bicycle with a height of 30".

NOTE: Measurement for a female should be determined using a man's model as a basis.

THIS ADDITION SHOWS THE MINIMUM HANDLE BAR STEM INSERTION MARK.

FOR SAFETY PLEASE INSERT STEM TO TOP PAINT LINE.
THIS LINE IS THE MINIMUM HANDLE BAR STEM INSERTION MARK. DISREGARD THE MAX. HEIGHT MARK ON YOUR STEM, BOTH THE WORDING AND THE MARK ARE IN ERROR.

CORRECT INSERTION MARK



"MAX. HEIGHT" MARKS